

CLAIMS

1. A method for the water-jet entangling of a fibrous web (N), consisting in placing the web on a porous support (10) that can move translationally or rotationally about an axis and in treating at least one face of the web by means of a plurality of water jets arranged in a row perpendicular to the run direction of the web, characterized in that the row contains jets (14A) with a first cross section and at least jets (24A) with a second cross section different from the first.

2. A method for the water-jet entangling of a fibrous web, consisting in placing the web on a porous support that can move translationally or rotationally about an axis and in treating the web by means of a plurality of water jets arranged in at least two rows perpendicular to the run direction of the web, characterized in that the rows contain jets (14, 16, 17, 18, 19) with a first cross section and at least jets (24, 26, 27, 28, 29, 39) with a second cross section different from the first, at least one row containing jets whose mutual spacing is not constant.

3. The method as claimed in the preceding claim, in which the web is treated by means of jets arranged in a number of rows that ranges from two to four.

4. The method as claimed in claim 2 or 3, the rows of jets of which are produced by the same injector (22).

5. The method as claimed in either of claims 3 and 4, one row of which contains jets (14, 18) forming spaced-apart groups, the row that follows having jets that are not aligned, in the run direction of the web, with the jets (24, 28) of the first row.

6. The method as claimed in either of claims 3 and 4, one row of which contains jets (17) forming spaced-apart groups, the row that follows having jets (27, 27') partly aligned, in the run direction of the web,
5 with those of the first row.

7. The method as claimed in either of claims 5 and 6, the first row containing jets of a first cross section and the following row jets of a second cross section.
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8. The method as claimed in either of claims 5 and 6, the first row containing jets of a first cross section and jets of a second cross section, the following row containing jets of a second cross section, or else jets
15 of a second cross section and jets of a third cross section.

9. The method as claimed in one of the preceding claims, in which both faces of the web are treated.
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10. The method as claimed in one of the preceding claims, in which essentially cellulose fibers, especially cotton fibers, are treated.

25 11. A device for implementing the method as claimed in one of the preceding claims, in which the jets are produced by perforations provided along a strip placed facing a water delivery channel, characterized in that the perforations in any one strip (30) have different
30 cross sections.

12. The device as claimed in the preceding claim, the strip (30) of which has at least two rows of perforations.
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13. The device as claimed in the preceding claim, the perforations of any one row of which have a first cross

section, this cross section being different from the cross section of the perforations of the other row.

14. A fibrous web comprising fibers hydroentangled by water jets, having, on at least one face, grooves formed by said hydroentangling, characterized in that it comprises at least:

- first grooves from 50 to 600 μm in depth with a spacing between a first groove and an adjacent groove ranging from 0.2 to 5 mm; and
- at least one second groove from 200 to 1000 μm in depth with a spacing between a second groove and an adjacent groove ranging from 2 to 9 mm, the depth and the spacing of the second groove both being greater than those of the first grooves.

15. The fibrous web as claimed in claim 14, comprising at least one group of at least two adjacent second grooves and preferably at most five adjacent second grooves.

16. The fibrous web as claimed in claim 15, comprising at most six adjacent second grooves.

17. The fibrous web as claimed in claim 14, 15 or 16, the first grooves of which have a depth ranging from 50 to 250 μm .

18. The fibrous web as claimed in one of claims 14 to 17, comprising at least one group of at least two adjacent first grooves and preferably at most twenty adjacent first grooves.

19. The fibrous web as claimed in one of claims 14 to 18, the spacing between a first groove and an adjacent groove of which ranges from 0.2 to 2 mm, preferably from 1 to 2 mm.

20. The fibrous web as claimed in one of claims 14 to 19, the spacing between a second groove and an adjacent groove of which ranges from 3 to 5 mm.

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21. The fibrous web as claimed in one of claims 14 to 20, comprising third grooves different from the first and second grooves.

10 22. The fibrous web as claimed in claim 21, the third grooves of which differ from the two others by their depth.

15 23. The fibrous web as claimed in claim 22, the third grooves of which differ from the two others by their spacing.

20 24. The web as claimed in one of claims 14 to 23, obtained using the method as claimed in one of claims 1 to 10.

25. A fibrous pad intended for skin care, produced from a web as claimed in one of claims 14 to 24.